



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/572,752

03/21/2006

Syuuji Nakamura

27304U

3327

20529

7590

06/17/2008

NATH & ASSOCIATES  
112 South West Street  
Alexandria, VA 22314

EXAMINER

CHANG, JENNIFER F

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

06/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/572,752	<b>Applicant(s)</b> NAKAMURA ET AL.	
	<b>Examiner</b> JENNIFER F. CHANG	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Amendment A received on February 19, 2008 has been entered into the record.
2. Claims 1-10 are pending.

### ***Response to Arguments***

3. Applicant's amendments directed to the objections to the specification for informalities have been sufficient to overcome the objections, and the objections are withdrawn. Applicant's remarks and amendments with respect to claims 1-4 have been fully considered but they are not persuasive and are also moot in view of the new grounds of rejection. Applicant's amendments with respect to claims 5-10 have been considered but are moot in view of the new ground(s) of rejection.

4. With respect to claims 1-4, the recitation *an embedded door handle antenna* has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

5. With respect to claim 1, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. *Orthmann's antenna does not have a core composed of a single part and is not made of soft material*) are not recited in the amended claim(s). Claim 1 as amended states the

Art Unit: 2821

magnetic core consists of a flexible magnetic body made of soft material. Although the term *consists* is a closed term excluding any element, step, or ingredient not specified in the claim, the term *body* is so broad that the claim is not limited to a single part as argued, but can apply to a collective whole made of many parts. Furthermore, the applicant's remark that the term *soft magnetic* was not intended to refer to the technical meaning referring to the characteristic that magnetization is not left after an added magnetic field is removed, but rather a material that is soft (i.e. bendable) is not persuasive in light of the specification. All occurrences of the term *soft* in the specification refer to the magnetic property, not the physical property of being bendable or yielding.

6. With respect to claims 3 and 4, in response to applicant's argument that the references fail to show certain features of applicant's invention (i.e. the core provided with an extending portion which outwardly extends from a coiled section around which the insulative insulation covered conductor is wound, and an electronic component mounted on the extending portion), the applicant has not given convincing reason as to why the cited references do not apply. The argument that the invention of Masaharu is a transponder encapsulated in a glass capsule and inserted into animals is not relevant. Both the antenna of Orthmann and the transponder of Masaharu comprise a magnetic core and a coil wound around the core, and serve the purpose of transmitting data wirelessly. The transponder of Masaharu and the antenna of Orthmann are therefore analogous art, and the rejection is not traversed.

***Claim Rejections - 35 USC § 112***

7. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 recites the limitation the antenna is energized by an action of at least one of a request switch and a proximity of a keyless entry component. The specification and drawings do not describe a proximity of keyless entry component and how it affects the antenna.

8. Claim 6 recites the limitation "the embedded antenna" in line 8. There is insufficient antecedent basis for this limitation in the claim. The Examiner has interpreted this to refer to "an antenna" in line 3. Appropriate correction is required.

9. Claim 8 recites the limitation "the core" in line 2. There is insufficient antecedent basis for this limitation in the claim. The Examiner has interpreted this to refer to "a flexible magnetic core," in claim 6, line 4. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 4, 6 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Maruyama (US 2003/0184489 A1).

Art Unit: 2821

12. As to Claim 1, Maruyama teaches an embedded door handle antenna, comprising:

an antenna having a core ("core portion," [0009]) around which an insulation covered conductor is wound ("insulated coating conductive coil," [0030]), wherein

the core comprises a magnetic core and a wiring layer which are laminated on each other [0016-0017], and

the magnetic core consists of a flexible magnetic body ("plurality of magnetic ribbons," [0009]) made of soft material ("amorphous metal," [0013], "soft magnetic characteristic," [0035]).

13. As to Claim 6, Maruyama teaches an embedded door handle antenna, comprising:

a door handle having a hollow portion therein ("door handle," [0004]);

an antenna embedded within the hollow portion of the door handle ("antenna... inside of a door or a door handle," [0004]),

the antenna comprising a flexible magnetic core ("core portion," [0009]) consisting a flexible magnetic body ("plurality of magnetic ribbons," [0009]) made of soft material ("amorphous metal," [0013], "soft magnetic characteristic," [0035]), the antenna further comprising a wiring layer ("coil portion," [0009]) around which an insulation covered conductor is wound ("insulated coating conductive coil," [0030]); and

a connector attached to one end of the antenna ("terminal electrodes," [0030]), the connector facilitating connection of the embedded antenna to a power circuit ("condenser," i.e. a capacitor which can store energy, [0030]), wherein

the antenna is energized by an action of at least one of request switch ("when it receives an ID code from the electric key, the system unlocks," [0003] and a proximity of a keyless entry

Art Unit: 2821

component (“when a person with an electric key approaches to the opening and closing portion, the system becomes a reception standby mode,” [0003].

14. As to claims 4 and 10, Maruyama teaches an electricity control section (“control portion,” [0032]) which permits and prohibits energizing the wiring layer depending upon an operation state of the antenna.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyana in view of Orthmann. Maruyama teaches the embedded door handle antenna substantially as claimed as applied to claim 6 above, but does not teach the wiring layer is formed on a printed board. Orthmann teaches an antenna comprising a magnetic core and a coil around the core formed by printed wiring arranged on a flexible film. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coil in Maruyama's antenna with the printed wire coil in Orthmann's antenna. One of ordinary skill in the art would have been motivated to make this modification in order to reduce the size of the antenna and to reduce production costs as printed wire can be very thin and easily manufactured in mass quantities.

17. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyana in view of Mejia (US 6,400,338). Maruyana teaches the embedded door handle antenna

Art Unit: 2821

substantially as claimed as applied to claim 6 above, but does not teach the core is provided with an extending portion which outwardly extends from a coiled section around which the insulation covered conductor is wound, and an electronic component is mounted on the extending portion. Mejia teaches the core ("unitary core," 12, Fig. 9A) is provided with an extending portion ("integrated circuit support portion," 18, Fig. 9A) which outwardly extends from a coiled section ("coil-forming portion," 16, Fig. 9A) around which the insulation covered conductor is wound ("coil portion," 22, Fig. 9A), and an electronic component ("capacitor," 28 or "integrated circuit," 14) is mounted on the extending portion. It would have been obvious to one of ordinary skill in the art to modify the antenna of Maruyana by extending the core beyond the portion around which an insulation covered conductor is wound to provide a space to mount an electronic component as taught by Mejia in order to simplify the assembly work and to provide a unified antenna apparatus that can easily be embedded into a system.

18. As to claims 5 and 9, Maruyana in view of Mejia teaches the embedded door handle antenna substantially as claimed as applied to claims 3 and 8 above, but do not explicitly teach the electronic component is a light emitting component. Light emitting components are well known in the electrical art, and one of ordinary skill in the art could have combined these elements as claimed by known methods and with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.



***Prior Art Made of Record***

19. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

- a. Ieda et al. (US 6,795,032) discloses an antenna device inside of a door handle.
- b. Maruyama et al. (US 6,400,330) discloses a bar antenna including a single body ferromagnetic substance core

***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER F. CHANG whose telephone number is (571) 270-3831. The examiner can normally be reached on Monday-Friday 8:00am - 4:30pm.

Art Unit: 2821

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JENNIFER F CHANG/  
Examiner, Art Unit 2821

/Huedung Cao Mancuso/  
Primary Examiner, Art Unit 2821